REBUTTAL TESTIMONY

OF

MATTHEW SMITH

PIPELINE SAFETY ANALYST II

SAFETY AND RELIABILITY DIVISION

ILLINOIS COMMERCE COMMISSION

Illinois Commerce Commission On Its Own Motion

vs.

City of Creal Springs Gas Utility

DOCKET NO. 12-0637

Citation for alleged violations of

Federal rules incorporated

By the Illinois Commerce Commission

Regarding general requirements

September 4, 2013

WITNESS IDENTIFICATION

Q. What is your name and business address?

A. My name is Matthew Smith. My business address is 527 E. Capitol Avenue, Springfield, IL.

Q. Are you the same Matthew Smith who provided direct testimony (Staff Ex. 1.0) in this proceeding?

A. I am.

PURPOSE OF TESTIMONY

Q. What is the purpose of your rebuttal testimony?

A. I conducted an audit of Creal Springs' compliance records and an associated field audit on July 9-11, 2013 ("July 2013 audit"). The main focus of the audit was to determine if Creal Springs has complied with the deficiencies I identified in my original testimony (Staff Ex. 1.0). In addition, I reviewed compliance records dating from April 24, 2012, to July 9, 2013. The purpose of my testimony is to discuss the findings of the July 2013 audit.

Q. You mentioned that in addition to determining if Creal Springs has become compliant with the deficiencies you identified in your previous testimony, you reviewed records dating back to April 24, 2012. Why did you review records dating from April 24, 2012 to July 9, 2013?

A. The last audit was conducted on April 24, 2012. I wanted to review the compliance records maintained by Creal Springs to determine if the system has been maintained as required by 49 C.F.R. § 192 since that audit.

Q. Please identify the sections of 49 C.F.R. Part 192 noted during your direct testimony (Staff Ex. 1.0)?

A. My previous testimony focused on four sections of 49 C.F.R. Part 192 that I determined Creal Springs to have continually violated. The sections were 49 C.F.R. §§192.465 (d), 192.615 (c), 192.625 (f), and 192.721 (b).

Q. Did your review of the compliance records determine Creal Springs met all the requirements of the various code sections listed above?

A. No.

Q. First, please address what you discovered during your audit with respect to each code section you identify above, beginning with 47 C.F.R. §192.465(d).

A. I originally testified that Creal Springs failed to maintain adequate cathodic protection at 1019 Creal Springs Road.[1] That location had deficient cathodic protection level since 2009. During my review of compliance records, I determined the gas service to 1019 Creal Springs Road was replaced with a polyethylene service pipe, which does not require cathodic protection. Because polyethylene pipe does not require cathodic protection, I determined Creal Springs was no longer in violation at 1019 Creal Springs Road.

Q. You mention Creal Springs is not in violation at 1019 Creal Springs Road, but what did you discover during your review of compliance records?

A. I discovered during my compliance record review that there were three locations, 300 Chamness, 606 S. Line, and 900 W. Henshaw Streets, which had deficient cathodic protection levels since at least 2012.

[1] Staff Ex. 1.0 at 10.

Q. Did you personally inspect these locations to determine if adequate cathodic protection was applied?

A. I personally inspected and obtained pipe-to-soil potential readings at 300 Chamness and 606 S. Line Streets.

Q. What were the cathodic protection levels?

A. The readings obtained on July 11, 2013, determined that the cathodic protection level at 300 Chamness was -0.29 Volts Direct Current ("VDC") and that the cathodic protection level at 606 S. Line was -0.35 VDC.

Q. What is the minimum cathodic protection level required?

A. An operator has four choices according to 49 C.F.R. § 192, Appendix D (1971). The choice Creal Springs has opted to use requires the pipeline to maintain a cathodic protection level of -0.85 VDC at a minimum. A cathodic protection level must meet the minimum level or has to be more negative than -0.85 VDC. A cathodic protection level more positive than -0.85 VDC is considered deficient and requires further actions by the operator.

Q. Do the two locations listed above meet this requirement?

A. No, they did not meet the requirement.

Q. Please explain.

A. Both cathodic protection readings, -0.29 VDC and -0.35 VDC, are more positive than the -0.85 VDC required.

Q. Would you please explain your findings for the location at 900 W. Henshaw Street?

A. I did not obtain a reading due to the location of the gas meter in the fenced in area of the customer's yard, but the compliance records indicated that the reading was -0.48 VDC in 2011 and that the reading was -0.29 VDC in 2012. Those readings indicate that cathodic protection levels were deficient for longer than a year.

Q. Is there a requirement to bring the cathodic levels up within a required time frame?

A. Yes. 49 C.F.R. § 192.465 (d) requires that "each operator shall take prompt remedial action to correct any deficiencies indicated by the monitoring."

Q. What is meant by prompt?

A. Each operator is required to define prompt in their own Operations and Maintenance Manual, but the ICC Pipeline Safety Department does not consider that a "prompt" response would be to allow a deficient reading to remain deficient through the next read cycle, which is typically 12 months.

Q. Would you summarize your findings regarding 49 C.F.R. § 192.465 (d) (2010)?

A. Creal Springs took action to correct the deficient cathodic protection reading at 1019 Creal Springs Road by replacing the service with a pipeline that does not require cathodic protection. Although that one location was corrected, Creal Springs has continued to disregard obligations imposed by 49 C.F.R. § 192.465 (d) at three other locations.

Q. The second violation you discussed in your direct testimony dealt with 49 C.F.R. § 192.615 (c)[2]. What were your findings during the July 2013 audit?

[2] Staff Ex. 1.0 at 11-12

A. Creal Springs provided a record of a liaison meeting held in June 2012. The record listed the people who were at the liaison meeting along with the minutes of the meeting.

Q. Were the records adequate?

A. No, they were not adequate.

Q. Why?

A. 49 C.F.R. § 192.615 (c) (2009) states in part that "each operator shall establish and maintain liaison with appropriate fire, police, and other public officials." The record provided by Creal Springs listed the people present as the Creal Springs Mayor, Gas Superintendent, and Fire Chief.

Q. Why is this not adequate?

A. The requirement is to maintain liaison with appropriate fire, police, and other public officials. The operator must determine who may respond to an emergency and maintain a liaison with those officials. This record did not indicate that any police officials, either local or regional, attended the meeting.

Q. Creal Springs failed to maintain a liaison with the appropriate groups, but was the meeting with the Creal Springs Fire Chief adequate?

A. No, it was not.

Q. Why?

A. I reviewed the minutes of the meeting and noticed a discussion was held with the Fire Chief that valves would not be shut off by the Creal Springs Fire Department unless it was an emergency. During my audit, I asked which valves the Fire Department may shut off in an emergency. It was not clear if the minutes referred to

customer meter valves at each residence or underground emergency valves. I mentioned that if the Creal Springs Fire Department is granted rights by the Creal Springs Gas Department to shut off underground emergency valves, then each fireman would be required to be operator-qualified and drug and alcohol tested according to requirements in 49 C.F.R. §§ 192 and 199.

The minutes of the meeting only discussed shutting off valves in the case of an emergency. In addition, there are specific items to be discussed in 49 C.F.R. § 192.615 (c), which Creal Springs did not address, such as, learning the responsibilities of each government organization that may respond to an emergency. The purpose of this code section is to maintain a dialogue between the appropriate groups to understand when the various groups may be contacted in an emergency and the actions that may be required by the various groups. This dialogue should alleviate any confusion when an emergency occurs and each group would better understand their roles in the emergency.

Q. Would you please summarize your findings regarding 49 C.F.R. § 192.615 (c).

A. I reviewed a record provided by Creal Springs to document what was believed to be their compliance with the liaison requirement. The review determined the appropriate police departments were not contacted. Furthermore, the required items that must be discussed were not discussed in the single meeting held with the Creal Springs Fire Chief.

Q. The third violation you discussed in your direct testimony dealt with 49 C.F.R. § 192.625 (f).[3] What were your findings during the July 2013 audit?

[3] Staff Ex. 1.0 at 14-15

A. I was provided compliance records which indicated Creal Springs has verified the amount of odorant injected in the gas system by monitoring the odorizer tank levels monthly. Also, I was provided with records of monthly inspections conducted in the Creal Springs gas distribution system where odorant in gas levels were obtained using a calibrated machine used to detect the levels.

Q. Was Creal Springs' response to this matter adequate?

A. Yes, it was. The compliance records provided during the July 2013 audit were consistent with records maintained by operators in Illinois to meet the obligations of C.F.R. § 192.625 (f).

Q. The final violation you discussed in your direct testimony dealt with 49 C.F.R. § 192.721 (b).[4] What were your findings during the July 2013 audit?

A. I was provided with compliance records which indicated Creal Springs conducted a patrol both inside and outside the business district of their natural gas system within the required time frames for 2012 and to date in 2013.

Q. Was Creal Springs' response to this matter adequate?

A. Yes. The compliance records provided during the July 2013 audit were consistent with records maintained by operators in Illinois to meet the obligations of C.F.R. § 192.721 (b).

Q. Previously in your testimony you mentioned other compliance records you reviewed during your July 2013 audit. What were your findings?

A. I discovered numerous new violations.

Q. Do you intend to discuss all of the newly-discovered violations?

[4] Staff Ex. 1.0 at 15-17

A. No, I do not.

Q. Why?

A. Although all violations are serious, some of the violations I identified in the July audit were a matter of failure to document records, but two violations were of a serious and immediate hazard.

Q. Please explain these possibly hazardous violations.

A. I discovered the first violation while conducting a field audit to verify the paper compliance records. During this audit, I noticed what appeared to be a vent casing. A vent casing is connected to a casing pipe to vent away natural gas in case a leak occurs. Typically a casing pipe is used to protect a gas main from external loading forces caused by railroad trains or heavy vehicles on the highway. A casing is installed under railroad tracks or a highway and the gas main is inserted inside. The casing is of a larger diameter pipe and allows the heavy loading to be absorbed and not transferred to the gas main.

After observing the vent casing, I asked Jeff Marks, Gas Superintendent, if he was aware of a casing in his system. He stated he was not aware of a casing. I gave the approximate location of the vent casing and asked Mr. Marks to follow us to the location. Once we arrived, Mr. Marks stated he thought this might be a handrail. The pipe configuration was of a vent casing and I asked Mr. Marks to do further research into whether the vent casing is part of the natural gas distribution system.

Two areas of concern exist regarding the vent casing. First, Mr. Marks is operator qualified and should be able to recognize a vent casing. The second area of concern

is whether the casing is insulated from the gas main. If the two are in contact, then an electrical current short can occur, causing a reduction in cathodic protection which could cause the gas main to leak. Each operator is required to inspect a casing for electrical isolation and to take necessary action if electrical isolation does not exist. The second violation involves the equipment Creal Springs used to investigate a possible gas leak. Creal Springs used a Combustible Gas Indicator ("CGI") to investigate gas leaks. On March 29, 2012, I conducted a brief audit of the Creal Springs gas system. During that audit, I reviewed operator qualification records to determine if Mr. Marks was qualified to conduct a leak investigation. I determined Mr. Marks was not qualified and was not aware he was not qualified to conduct either an inside or outside leak investigation. The discussion went from OQ records to the CGI used to investigate leaks. I was provided the CGI that Creal Springs used. I was able to obtain the last calibration date from the equipment and determined it was last calibrated on November 9, 2007. This equipment is typically calibrated monthly by operators in Illinois.

During the July 2013 audit, I requested the same CGI to review the last calibration date. Each CGI has two calibration ranges, a high range and a low range. The high range calibrates the equipment to 100% natural gas (methane). The low range calibrates the CGI to 2.5% natural gas (methane) or 50% of the Lower Explosive Limit ("LEL"). Most inside gas leaks are discovered when a faint odor of gas is present. Such a low level is typically well below the 50% LEL range. Because most inside gas leaks are detected using the low range of the CGI, it is extremely important for the CGI to be properly calibrated to this range.

I reviewed Mr. Marks OQ records to determine if he was qualified to calibrate this CGI. I determined that Mr. Marks was qualified and, while reviewing the process Mr. Marks uses to calibrate the CGI, I realized he was not calibrating the correct settings. It is imperative an operator of a natural gas system understand how to use a CGI to properly conduct a leak investigation. Without a properly calibrated CGI, a gas leak can be missed, thus allowing a house to continue filling with natural gas. If the gas level continues to rise, it has the potential to reach the explosive range. A house explosion could occur because of a failure to properly indentify and classify gas levels during a leak investigation.

Q. Would you sum up your testimony?

A. Creal Springs has taken some actions to clear the violations, but has not taken the appropriate actions to clear all of the violations. The discovery of new violations only emphasizes the point that the individuals at Creal Springs do not understand the federal requirements and/or the requirements listed in their own O&M.

The lack of overall progress is a concern that should not be overlooked. Creal Springs needs to take further actions to correct the glaring deficiencies discovered during the July 2013 and previous audits.

Q. In your Direct Testimony, you proposed that a penalty be assessed against Creal Springs in the amount of $62,000.00. After the July 2013 audit, what penalty do you believe should be assessed?

A. I continue to believe the $62,000.00 amount should be assessed against Creal Springs for the continual failure to adequately and properly operate a natural gas distribution system.

Q. Does this conclude your testimony?

A. Yes.